

CLAIMS

1 1. A method of providing authentication for a network-based transaction,
2 the method comprising:
3 presenting a first information set to a user through an Internet ac-
4 cess device, the first information set being associated with the transaction;
5 creating a coupling between the first information set and a second
6 information set, wherein the second information set is also associated with
7 the transaction;
8 presenting the second information set to the user and requesting
9 authorization of the transaction at a mobile terminal using public land mo-
10 bile network (PLMN) radio resources; and
11 receiving authorization information for the transaction from the mo-
12 bile terminal using the PLMN radio resources.

1 2. The method of claim 1 wherein creating the coupling further comprises
2 sending a wireless application protocol (WAP) push message to the mobile termi-
3 nal.

1 3. The method of claim 1 wherein the authorization information comprises
2 client-side public key infrastructure (PKI) information.

1 4. The method of claim 2 wherein the authorization information comprises
2 client-side public key infrastructure (PKI) information.

1 5. The method of claim 1 wherein the authorization information comprises
2 a password.

1 6. The method of claim 5 wherein the authorization information further
2 comprises a caller line identification (caller ID) for the mobile terminal.

1 7. A method of authorizing a transaction in which transaction information is
2 presented to a user at an Internet access device in a first information set in a first
3 format suitable for presentation on the Internet access device, the method com-
4 prising:

5 creating a second information set in a second format suitable for
6 presentation at a mobile terminal, wherein the second information set is
7 representative of the first information set;

8 linking the first information set and the second information set;

9 sending the second information set to a public land mobile network
10 (PLMN) for presentation to the user at the mobile terminal; and

11 receiving authentication information from the mobile terminal through
12 the PLMN.

8. The method of claim 7 wherein linking the first information set and the second information set further comprises sending a wireless application protocol (WAP) push message to the mobile terminal.

9. The method of claim 8 wherein the WAP push message comprises a hyperlink to the second information set.

10. The method of claim 9 wherein the first information set is formatted in hypertext markup language (HTML) and the second information set is formatted in wireless markup language (WML).

11. The method of claim 10 wherein the second information set is further formatted to be signed by a user using a WAP signText script.

12. The method of claim 7 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

1 13. The method of claim 8 wherein the authentication information com-
2 prises client-side public key infrastructure (PKI) information.

1 14. The method of claim 9 wherein the authentication information com-
2 prises client-side public key infrastructure (PKI) information.

1 15. The method of claim 10 wherein the authentication information com-
2 prises client-side public key infrastructure (PKI) information.

1 16. Apparatus for providing authentication for a network-based transaction,
2 the apparatus comprising:

3 means for presenting a first information set to a user through an
4 Internet access device, the first information set being associated with the
5 transaction;

6 means for creating a coupling between the first information set and a
7 second information set, wherein the second information set is also associ-
8 ated with the transaction;

9 means for presenting the second information set to the user and re-
10 questing authorization of the transaction at a mobile terminal using public
11 land mobile network (PLMN) radio resources; and

means for receiving authorization information for the transaction
from the mobile terminal using the PLMN radio resources.

17. Apparatus for authorizing a transaction in which transaction information
is presented to a user at an Internet access device in a first information set in a
first format suitable for presentation on the Internet access device, the apparatus
comprising:

means for creating a second information set in a second format suitable
for presentation at a mobile terminal, wherein the second information
set is representative of the first information set;

means for linking the first information set and the second information
set;

means for sending the second information set to a public land mobile
network (PLMN) for presentation to the user at the mobile terminal; and

means for receiving authentication information from the mobile terminal
through the PLMN.

18. A computer program product comprising a computer program for
authorizing a transaction in which transaction information is presented to a user at
an Internet access device in a first information set in a first format suitable for
presentation on the Internet access device, the computer program further comprising:

6 instructions for creating a second information set in a second format
7 suitable for presentation at a mobile terminal, wherein the second informa-
8 tion set is representative of the first information set;

9 instructions for linking the first information set and the second infor-
10 mation set;

11 instructions for sending the second information set to a public land
12 mobile network (PLMN) for presentation to the user at the mobile terminal;
13 and

14 instructions for receiving authentication information from the mobile
15 terminal through the PLMN.

1 19. The computer program product of claim 18 wherein the instructions for
2 linking the first information set and the second information set further comprise
3 instructions for sending a wireless application protocol (WAP) push message to
4 the mobile terminal.

1 20. The computer program product of claim 19 wherein the WAP push
2 message comprises a hyperlink to the second information set.

1 21. The computer program product of claim 20 wherein the first information
2 set is formatted in hypertext markup language (HTML) and the second information
3 set is formatted in wireless markup language (WML).

1 22. The computer program product of claim 21 wherein the second infor-
2 mation set is further formatted to be signed by a user using a WAP signText
3 script.

1 23. The computer program product of claim 18 wherein the authentication
2 information comprises client-side public key infrastructure (PKI) information.

1 24. The computer program product of claim 19 wherein the authentication
2 information comprises client-side public key infrastructure (PKI) information.

1 25. The computer program product of claim 20 wherein the authentication
2 information comprises client-side public key infrastructure (PKI) information.

1 26. The computer program product of claim 21 wherein the authentication
2 information comprises client-side public key infrastructure (PKI) information.

1 27. A network that enables authentication of a transaction comprising:
2 a server system operable to create a first information set formatted
3 for an Internet access device and a second information set formatted for a
4 mobile terminal, the second information set representative of the first infor-
5 mation set which is in turn representative of the transaction, the server
6 system further operable to create a coupling between the first information
7 set and the second information set;
8 an Internet connection at the server system; and
9 a public land mobile network (PLMN) infrastructure operatively con-
10 nected to the server system so as to be operable to present the second in-
11 formation set at the mobile terminal and obtain authorization information
12 from the mobile terminal so that the transaction can be authenticated by the
13 server system.

1 28. The network of claim 27 wherein creating the coupling between the
2 first information set and the second information set is accomplished at least in part
3 by sending a wireless application protocol (WAP) push message to the mobile
4 terminal.

1 29. The network of claim 28 wherein the WAP push message comprises a
2 hyperlink to the second information set.

1 30. The network of claim 27 wherein the authentication information com-
2 prises client-side public key infrastructure (PKI) information.

1 31. The network of claim 28 wherein the authentication information com-
2 prises client-side public key infrastructure (PKI) information.

1 32. The network of claim 29 wherein the authentication information com-
2 prises client-side public key infrastructure (PKI) information.

1 33. A system for authorizing a transaction in which transaction information
2 is presented to a user at an Internet access device in a first information set in a
3 first format suitable for presentation on the Internet access device, the system
4 comprising:
5 a hypertext markup language (HTML) server operable to provide
6 content for the first information set and to create a coupling between the
7 first information set and a second information set;

8 a wireless markup language (WML) server operable to create the
9 second information set in a format suitable for presentation on a wireless
10 terminal, wherein the second information set is representative of the first
11 information set, the WML server operatively connected to the HTML server;
12 and

13 a network connection for the system operable to enable the WML
14 server to send the second information set over a public land mobile net-
15 work (PLMN) for presentation to the user at the mobile terminal and receive
16 authentication information from the mobile terminal.

1 34. The system of claim 33 wherein the WML server and the HTML server
2 operate on a single computing platform.

1 35. The system of claim 33 wherein the network connection is an Internet
2 connection.

1 36. The system of claim 33 wherein the coupling is created at least in part
2 by sending a wireless application protocol (WAP) push message to the mobile
3 terminal.

1 37. The system of claim 34 wherein the coupling is created at least in part
2 by sending a wireless application protocol (WAP) push message to the mobile
3 terminal.

1 38. The system of claim 35 wherein the coupling is created at least in part
2 by sending a wireless application protocol (WAP) push message to the mobile
3 terminal.

1 39. The system of claim 33 wherein the authentication information com-
2 prises client-side public key infrastructure (PKI) information.

1 40. The system of claim 34 wherein the authentication information com-
2 prises client-side public key infrastructure (PKI) information.

1 41. The system of claim 35 wherein the authentication information com-
2 prises client-side public key infrastructure (PKI) information.

1 42. The system of claim 36 wherein the authentication information com-
2 prises client-side public key infrastructure (PKI) information.